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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/591,536	11/13/2006	Patrick Lenoir	016782-0366	2986
22428	7590	10/16/2009	EXAMINER	
FOLEY AND LARDNER LLP			NDUBIZI, CHUKA CLEMENT	
SUITE 500			ART UNIT	
3000 K STREET NW			PAPER NUMBER	
WASHINGTON, DC 20007			3743	
			MAIL DATE	DELIVERY MODE
			10/16/2009	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/591,536

**Applicant(s)**

LENOIR, PATRICK

**Examiner**

CHUKA C. NDUBIZU

**Art Unit**

3743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 August 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 37-70 is/are pending in the application.
- 4a) Of the above claim(s) 1-36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 37-70 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/CDC)
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 11, 2009 has been entered.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

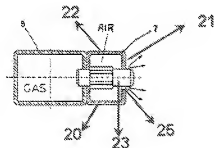
The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 37-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riepe et al 6,665,950 in view of Aldo 6,261,089. Riepe teaches the invention as claimed (fig 1-7). With regard to claim 37, 46 and 57 Riepe discloses an appliance for providing air and gas to a gas burner having a back tube 9 for receiving air and gas to be combusted, comprising: a gas tube 13 comprising an aperture (at 12) wherein the aperture of the gas tube is provided with a first part (see fig 4) of a detachable connection device, for receiving a second part (fig 6) of the detachable connection device provided on the back tube 9 for allowing gas from the gas tube to enter the back tube (column 4 lines 24-29). With regard to claim 46 Riepe also discloses a gas burner comprising a gas tube 13 comprising an aperture (through 12) for providing gas inwards to the back tube, the gas burner comprising: a radiant panel 1; and a back tube 9 for providing air and gas to the radiant panel, wherein the back tube has an orifice 17 for allowing air from the air tube 16 to enter inside the back tube, wherein the air tube 16 comprises opposing first and second wall regions (top and bottom of 16) connected by longitudinal wall regions (see fig 1) such that an inside space is enclosed by the first, second, and longitudinal wall regions, wherein the back tube 9 is provided with a second part (fig 6) of a detachable connection device for receiving a first part (fig 4) of the detachable connection device present at the aperture of the gas tube. With regard to claim 57 Riepe also discloses at least one gas burner 1 comprising a radiant panel (column 2 lines 67-68).

With regard to claims 37, 46 and 57 Aldo discloses a gas burner comprising an air tube 7 comprising opposing first 21 and second (opposite 21) wall regions connected

by longitudinal wall regions 20 and 22 such that an inside space is enclosed by the first, second, and longitudinal wall regions (see fig below); an aperture (on the wall opposite 21) for providing gas inwards to the air tube, wherein the air tube comprises a first aperture 25 at the first wall region for receiving the back tube 23 of the gas burner such that the back tube extends through the first aperture 25 from outside the first wall region into the inside space (see below).



It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Riepe's appliance by having part of the back tube enclosed by the air tube in order to provide an appliance that is compact where the air in the air tube bathes the back tube and cools it. This also helps preheat the combustion air and this would lead to enhanced burner efficiency.

With regard to claims 38 and 58 Aldo also discloses wherein the aperture of the gas tube (through wall opposite 21) and the first aperture 25 of the air tube are substantially aligned (23 is straight, see fig above).

With regard to claims 39, 48 and 59 Riepe also discloses wherein the detachable connection device is a quick connect coupling (column 4 lines 24-26).

With regard to claims 42, and 43 and 62 Riepe also discloses wherein the first part of the quick connect coupling constitutes a female sleeve (see fig 4) for receiving a male tubular organ from the second part (see fig 6) of the quick connect coupling; wherein the female sleeve has in its internal peripheral surface at least one annular groove (where the spring is located) opened towards its interior, and wherein the groove is adapted to receive an annular spring 27 (see fig 7).

With regard to claims 40, 41, 50 and 61 the recitations "wherein the first part of the quick connect coupling constitutes a male tubular organ for being received by a female sleeve from the second part of the quick connect coupling; and wherein the male tubular organ has on its external peripheral surface at least one annular groove opened outward, the groove being adapted to receive an annular spring" are deemed matters of rearrangement of parts that would not affect the functioning of the appliance. *In re Japikse*, 181. F.2d 1019, 86 USPQ 70 (CCPA 1950), MPEP 2144.04 VI C. Applicant is merely rearranging where the male and female organs are attached and where the groove and spring are located. The Applicant also acknowledged on page 9 lines 11-12 of the specification that the position of the two organs can be reversed.

With regard to claims 44 and 67, Riepe also discloses wherein the gas tube is located outside and adjacent to the air tube (see fig 1).

With regard to claims 44 and 67 Aldo also discloses wherein the gas tube is located outside and adjacent to the air tube (see fig above), wherein the air tube comprises a second aperture (opposite 25 where the back tube 23 enters the air tube)

at the second wall region (wall opposite 21) for communicating with the aperture of the gas tube 5,

Riepe in view of Aldo would have the first part of a detachable connection device (at the end of the back tube 9) extend to the inside space of the air tube (such that the air tube encloses the air inlet into the back tube in order to let air into the back tube)).

With regard to claims 45 and 68 Riepe also discloses wherein the first part (fig. 4) of the detachable connection device is provided with at least one sealing gasket 28 for providing a gas-tight coupling between the first part and the second part (fig. 6) of the detachable connection device.

With regard to claim 55 the recitation wherein the second part of the detachable connection device is provided with at least one sealing gasket for providing a gas- tight coupling between the first and second parts of the detachable connection device is deemed a matter of rearrangement of parts that would not affect the functioning of the appliance. *In re Japikse*, 181. F.2d 1019, 86 USPQ 70 (CCPA 1950), MPEP 2144.04 VI C. Applicant is merely rearranging where the sealing gasket is located by locating it on the second part instead of on the first part as taught by Riepe.

With regard to claims 47 and 69, in Riepe modified by Aldo (where the air tube surrounds the back tube) the second part of the detachable connection device would be adapted to pass through the first aperture of the air tube in order to complete the connection to the source of gas 5.

With regard to claims 49 Riepe also discloses wherein the second part of the quick connect coupling constitutes a male tubular organ (fig 6) for being received by a female sleeve (fig 4) of the first part of the quick connect coupling.

With regard to claims 51 and 65 Riepe also discloses wherein the back tube 9 has at its back end a male tubular organ (fig 6), wherein the male tubular organ comprises a piece of tube 11 penetrating in the back of the back tube, and wherein the piece of tube constitutes an injector organ for injecting gas into the back tube 9 (11 is a nozzle column 3 lines 31-32).

With regard to claims 52 and 66 Riepe also discloses, wherein the orifice 17 is provided at a level of the injector (see fig 3).

With regard to claims 53 and 54 the recitations wherein the second part of the quick connect coupling constitutes a female sleeve for being received by a male organ part of the quick connect coupling; and wherein the female sleeve has in its internal peripheral surface at least one annular groove opened towards its interior, and wherein the groove is adapted to receive an annular spring are deemed matters of rearrangement of parts that would not affect the functioning of the appliance. *In re Japikse*, 181. F.2d 1019, 86 USPQ 70 (CCPA 1950), MPEP 2144.04 VI C. Applicant is merely rearranging which one is the male and which one is the female part of the quick connect coupling as was disclosed by Riepe. The Applicant also acknowledged on page 9 lines 11-12 of the specification that the position of the two organs can be reversed.

With regard to claims 56 and 70 Riepe also discloses wherein the gas burner is an infrared radiant element (column 2 lines 67-68).



With regard to claims 60 Riepe also discloses wherein one of parts of the quick connect coupling constitutes a male tubular organ (fig 6), wherein the other of the parts of the quick connect coupling constitutes a female sleeve (fig 4), and wherein the male tubular organ is adapted for being received by the female sleeve (see fig 3).

With regard to claims 63 the recitation wherein the male tubular organ has on its external peripheral surface at least one annular groove opened towards the exterior, and wherein the gas burner further comprises the annular spring being received in the annular grooves of the male tubular organ is deemed a matter of rearrangement of parts that would not affect the functioning of the appliance. *In re Japikse*, 181. F.2d 1019, 86 USPQ 70 (CCPA 1950), MPEP 2144.04 VI C. Applicant is merely rearranging where the groove and spring are located. Furthermore having the spring on the female and on the male is a matter of duplication of parts that would not result in any new or unexpected result. *In re Harza*, 274 F.2d 699, 124 USPQ 378 (CCPA 1960). Riepe has the spring only on the female part.

With regard to claims 64 Riepe also discloses wherein the second part of the quick connect coupling constitutes a male tubular organ (see fig 6).

### ***Response to Arguments***

Applicant's arguments with respect to claims 37, 46 and 57 have been considered but are moot in view of the new ground(s) of rejection. Aldo discloses a gas burner comprising an air tube 7 comprising opposing first and second wall regions connected by longitudinal wall regions 20 and 22 such that an inside space is enclosed

by the first, second, and longitudinal wall regions (see fig above); wherein the air tube comprises a first aperture 25 at the first wall region for receiving the back tube 23 of the gas burner, such that the back tube 23 extends through the first aperture from outside the first wall region into the inside space (see fig above). Riepe in view of Aldo discloses all the limitations of the claims. One of ordinary skill in the art would modify Riepe by the teaching of Aldo; namely enclosing part the back tube with the air tube such that Riepe's air inlet to the back tube would be open to air in the air tube and such that the back tube extends through the first aperture from outside the first wall region into the inside space. The motivation would be to cool the back tube and at the same time preheat the combustion air and thereby enhance combustion efficiency.

### ***Conclusion***

The prior art made of record in the attached USPTO 892 and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHUKA C. NDUBIZU whose telephone number is (571)272-6531. The examiner can normally be reached on Monday - Friday 8.30 - 4.30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Rinehart can be reached on 571-272-4881. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chuka C Ndubizu/  
Examiner, Art Unit 3743

/Kenneth B Rinehart/  
Supervisory Patent Examiner, Art  
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